

Mr. Paul Schuchman
Jackel, Inc.
P.O. Box 96
Mishawaka, IN 46546

Re: Significant Source Modification No:
141-11875-00192

Dear Mr. Schuchman.:

Jackel, Inc. applied for a Part 70 operating permit on January 31, 2000 for stationary polyester resin filament wound fiberglass tanks plant. An application to modify the source was received on February 8, 2000. Pursuant to 326 IAC 2-7-10.5(f)(6) the following emission units are approved for construction at the source:

Six(6) polyester resin filament wound fiberglass tank stations and one(1) steel shot blaster.

The proposed Significant Source Modification approval will be incorporated into the pending Part 70 permit application pursuant to 326 IAC 2-7-10.5(l)(3). If there are no changes to the proposed construction of the emission units, the source may begin operating on the date that IDEM receives an affidavit of construction pursuant to 326 IAC 2-7-10.5(h). If there are any changes to the proposed construction the source can not operate until an Operation Permit Validation Letter is issued.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter call (800) 451-6027, press 0 and ask for Shantanu S. Pahi or extension 3-0868, or dial (317) 233-0868.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

Attachments

Spahi

cc: File - St. Joseph County
U.S. EPA, Region V
St. Joseph County Health Department
Northern Regional Office
Air Compliance Section Inspector - Paul Karkiewicz
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michele Boner

PART 70 *SIGNIFICANT* SOURCE MODIFICATION OFFICE OF AIR MANAGEMENT

**Jackel, Inc.
15314 Harrison Road
Mishawaka, IN 46544
and
1022 Union Street
Mishawaka, IN 46544**

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Source Modification No.: 141-11875-00193	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

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SECTION A

SOURCE SUMMARY

This approval is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the emission units contained in conditions A.1 through A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this approval pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary polyester resin filament wound fiberglass tanks plant.

Responsible Official: Paul Schuchman
Source Address: 15314 Harrison Road, Mishawaka, IN 46544
1022 Union Street, Mishawaka, IN 46544
Mailing Address: P.O. Box 96, Mishawaka, IN 46546
Phone Number: (219) 256-5635
SIC Code: 3088
County Location: St. Joseph
County Status: Attainment for all criteria pollutants
Source Status: Part 70 Permit Program
Minor Source, under PSD or Emission Offset Rules;
Major Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source is approved to construct and operate the following emission units and pollution control devices:

- (a) Six (6) polyester resin filament wound fiberglass tank stations, identified as 3, 4, 5, 6, 7 and 8, each station with a maximum molding capacity of sixty seven and one half (67.5) pounds of polyester resin per hour, using no controls, and exhausting inside the building.
- (b) One (1) steel shot blaster, identified as Goff, with a maximum shot blasting capacity of two thousand and one hundred and sixty (2,160) pounds of steel parts per hour, and exhausting to a cyclone and a baghouse.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONSTRUCTION CONDITIONS

B.1 Permit No Defense [IC 13]

This approval to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.2 Definitions [326 IAC 2-7-1]

Terms in this approval shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2 and 326 IAC 2-7 shall prevail.

B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

B.4 Revocation of Permits [326 IAC 2-1.1-9(5)][326 IAC 2-7-10.5(i)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.5 Significant Source Modification [326 IAC 2-7-10.5(h)]

This document shall also become the approval to operate pursuant to 326 IAC 2-7-10.5(h) when, prior to start of operation, the following requirements are met:

- (a) The attached affidavit of construction shall be submitted to the Office of Air Management (OAM), Permit Administration & Development Section, verifying that the emission units were constructed as proposed in the application. The emissions units covered in the Significant Source Modification approval may begin operating on the date the affidavit of construction is postmarked or hand delivered to IDEM if constructed as proposed.
- (b) If actual construction of the emissions units differs from the construction proposed in the application, the source may not begin operation until the source modification has been revised pursuant to 326 IAC 2-7-11 or 326 IAC 2-7-12 and an Operation Permit Validation Letter is issued.
- (c) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
- (d) The Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.

However, in the event that the Title V application is being processed at the same time as this application, the following additional procedures shall be followed for obtaining the right to operate:

- (1) If the Title V draft permit has not gone on public notice, then the change/addition covered by the Significant Source Modification will be included in the Title V draft.
- (2) If the Title V permit has gone thru final EPA proposal and would be issued ahead of the Significant Source Modification, the Significant Source Modification will go thru a concurrent 45 day EPA review. Then the Significant Source Modification will be incorporated into the final Title V permit at the time of issuance.

- (3) If the Title V permit has not gone thru final EPA review and would be issued after the Significant Source Modification is issued, then the Modification would be added to the proposed Title V permit, and the Title V permit will issued after EPA review.

B.6 Phase Construction Time Frame

That pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the IDEM may revoke this approval to construct if the:

- (a) Construction of Phase 1 has not begun within eighteen (18) months from the effective date of this approval or if during the construction of Phase 1, work is suspended for a continuous period of one (1) year or more.
- (b) Construction of Phase 2 has not begun within eighteen (18) months after the operation of Phase 1 or if during the construction of Phase 2, work is suspended for a continuous period of one (1) year or more.

The OAM may extend such time upon satisfactory showing that an extension, formally requested by the Permittee is justified.

B.7 BACT Determination for Phase Constructions

That pursuant to 40 CFR 52.21(j)(4), for phase construction projects, the determination of BACT shall be reviewed and modified as appropriate at the latest reasonable time which occurs no later than eighteen (18) months prior to commencement of construction of each independent phase of the project.

SECTION C GENERAL OPERATION CONDITIONS

C.1 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

- (a) Where specifically designated by this approval or required by an applicable requirement, any application form, report, or compliance certification submitted under this approval shall contain certification by a responsible official of truth, accuracy, and completeness. This certification, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, on the attached Certification Form, with each submittal.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this approval, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) within ninety (90) days after issuance of this approval, including the following information on each facility:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond its control, the PMP cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM, OAM upon request and shall be subject to review and approval by IDEM, OAM. IDEM, OAM may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

C.3 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this approval.

- (b) Any application requesting an amendment or modification of this approval shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34) only if a certification is required by the terms of the applicable rule

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

C.4 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), visible emissions shall meet the following, unless otherwise stated in this approval:

- (a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.5 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided in this approval, all air pollution control equipment listed in this approval and used to comply with an applicable requirement shall be operated at all times that the emission unit vented to the control equipment is in operation.

Testing Requirements [326 IAC 2-7-6(1)]

C.6 Performance Testing [326 IAC 3-6][326 IAC 2-1.1-11]

- (a) Compliance testing on new emission units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this approval, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAM.

A test protocol, except as provided elsewhere in this approval, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

- (b) All test reports must be received by IDEM, OAM within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAM, if the source submits to IDEM, OAM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.7 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Compliance with applicable requirements shall be documented as required by this approval. All monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of approval issuance. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.8 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-7-5][326 IAC 2-7-6] [326 IAC 1-6]

- (a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:
- (1) This condition;
 - (2) The Compliance Determination Requirements in Section D of this approval;
 - (3) The Compliance Monitoring Requirements in Section D of this approval;
 - (4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this approval; and
 - (5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this approval. CRP's shall be submitted to IDEM, OAM upon request and

shall be subject to review and approval by IDEM, OAM. The CRP shall be prepared within ninety (90) days after issuance of this approval by the Permittee and maintained on site, and is comprised of :

- (A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this approval; and
 - (B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.
- (b) For each compliance monitoring condition of this approval, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the approval unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.
- (c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:
- (1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the approval conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the approval, and such request has not been denied or;
 - (3) An automatic measurement was taken when the process was not operating; or
 - (4) The process has already returned to operating within "normal" parameters and no response steps are required.
- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

C.9 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]
[326 IAC 2-7-6]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this approval exceed the level specified in any condition of this approval, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected facility while the corrective actions are being implemented. IDEM, OAM shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM reserves the authority to use enforcement activities to resolve noncompliant stack tests.

- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAM that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate approval conditions may be grounds for immediate revocation of the approval to operate the affected facility.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.10 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6] [326 IAC 2-7-19 (e)]

- (a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by April 15 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements and be used for the purpose of a Part 70 fee assessment:
 - (1) Indicate actual emissions of criteria pollutants from the source;
 - (2) Indicate actual emissions of other regulated pollutants (as defined by 326 IAC 2-7-1) from the source, for purposes of Part 70 fee assessment.
- (b) The annual emission statement covers the twelve (12) consecutive month time period starting December 1 and ending November 30. The annual emission statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The emission statement does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

C.11 Monitoring Data Availability [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)]

- (a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this approval shall be performed at all times the equipment is operating at normal representative conditions.
- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this approval is not operating, the Permittee shall either record the fact that the equipment is shut

down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this approval.

- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.
- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.
- (e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.
- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.12 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]

- (a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAM representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Records of required monitoring information shall include, where applicable:
 - (1) The date, place, and time of sampling or measurements;
 - (2) The dates analyses were performed;
 - (3) The company or entity performing the analyses;
 - (4) The analytic techniques or methods used;
 - (5) The results of such analyses; and
 - (6) The operating conditions existing at the time of sampling or measurement.
- (c) Support information shall include, where applicable:
 - (1) Copies of all reports required by this approval;
 - (2) All original strip chart recordings for continuous monitoring instrumentation;
 - (3) All calibration and maintenance records;
 - (4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be

relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this approval, and whether a deviation from an approval condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.

- (d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of approval issuance.

C.13 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

- (a) The reports required by conditions in Section D of this approval shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

- (b) Unless otherwise specified in this approval, any notice, report, or other submission required by this approval shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.
- (c) Unless otherwise specified in this approval, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period. The reports do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) The first report shall cover the period commencing on the date of issuance of this approval and ending on the last day of the reporting period.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (a) Six (6) polyester resin filament wound fiberglass tank stations, identified as 3, 4, 5, 6, 7 and 8, each station with a maximum molding capacity of sixty seven and one half (67.5) pounds of polyester resin per hour, using no controls, and exhausting inside the building.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6 (New Facilities; general reduction requirements), the BACT for the fiberglass panel manufacturing line shall be satisfied by the requirements of 326 IAC 2-4.1-1 (New Source Toxics Control) specified in Condition D.1.2.

D.1.2 New Source Toxics Control [326 IAC 2-4.1-1]

The Permittee shall comply with the following conditions that have been determined to be Maximum Achievable Control Technology for the new polyester resin filament wound fiberglass tank stations:

- (a) The HAP monomer content of styrene-containing resins used shall be limited to the following:

Type of Resin	HAP Monomer Content, % by weight
Corrosion Resistant	38
Non-Corrosion Resistant	31

- (1) HAP monomer contents shall be calculated on a neat basis, which means excluding any filler.
- (2) Corrosion resistant resin means a resin that meets the criteria in subsections (A) and (B), or (B) and (C) below:
- (A) A resin that displays substantial retention of mechanical properties by one of the following methods:
- (i) Using ASTM C-581 coupon testing, the corrosion resin will be exposed for not less than six month to one of the following: materials with a pH ≥ 12.0 or ≤ 3.0 , oxidizing or reducing agents, organic solvents, or fuels or fuel additives as defined in 40 CFR 79.2.
- (AA) The exposed resin shall demonstrate a minimum of fifty percent (50%) retention of the relevant mechanical property compared to the same resin in the unexposed condition.
- (BB) In addition, the resin shall demonstrate an increased retention of the relevant mechanical property of at least

twenty percent (20%) when compared to a similarly exposed general-purpose resin. For example, if the general-purpose resin retains forty-five percent (45%) of the relevant property when tested as specified above, then a corrosion resin must retain at least sixty-five percent (65% (45% + 20%)) of its property. The general purpose resin used for comparison shall be one formulated with a one to two (1:2) ratio of maleic anhydride to phthalic anhydride, one hundred percent (100%) diethylene glycol, a molecular weight (M_N) greater than one thousand (1000), and styrene content of not less than forty-three percent (43.0%) or greater than forty eight percent (48.0%).

- (ii) Comply with industry standards that require specific exposure testing to corrosive media, such as UL 1316, UL 1746, or ASTM F-1216.
 - (B) The resin is used to manufacture a product to an accepted standard for corrosion-resistance or food contact. Such standards include, but are not limited to, ASME RTP-1, or Section X; ASTM D2296, D2297, D3262, D3299, D3517, D3754, D3839, D3840, D3982, D4024, D4097, D4160, D4161, D4162, D4163, D4184, or D5364; ANSI/AWWA C950; UL 1316 OR 1746; or written customer requirements for resin type or resistance to specified chemical environments.
 - (C) The resin is used to manufacture a product specifically for an application that requires increased chemical inertness or resistance to chemical attack. Such applications may include, but are not limited to, products intended for use in chemical processing, chemical storage, pulp and paper, sewer and waste water treatment, power generation, potable water, food and drug processing, pollution or odor control, metals production and plating, semiconductor manufacturing, petroleum production, petroleum storage, petroleum refining, mining, textiles, nuclear, cosmetic, septic systems, oil-water separators, stacks, hoods, ducts, scrubbers, fans, tanks and vessels.
- (b) Resins with HAP monomer contents lower than that required in subsection (a) and/or other emission reduction techniques approved by IDEM, OAM may be used to offset the use of resins with HAP monomer contents higher than that required in subsection (a). This is allowed to meet the HAP monomer content limits for resins in subsection (a), and if used, compliance shall be demonstrated as follows:
- (1) Compliance shall be demonstrated on an equivalent emissions mass basis. using the following equation:

(Emissions from higher than compliant HAP monomer content resin) -
(Emissions from compliant resin) \neq (Emissions from compliant resin) -
(Emissions from lower than compliant HAP monomer content resin and/or using other emission reduction techniques).

Where:

Emissions, lb or ton = M (mass of resin used, lb or ton) * EF (HAP monomer emission factor for resin used, lb/ton); and

EF, HAP monomer emission factor = emission factor, expressed as pounds (lbs) HAP emitted per ton of resin processed, which is indicated by the HAP monomer content and/or other emission reduction techniques for each resin used.

- (2) The calculation in subsection (b)(1) above to demonstrate compliance shall be made and recorded on a monthly basis. Monthly resin usage by weight, weight percent content of HAP monomer for each resin, and other emission reduction technique used for each resin shall also be recorded.
 - (3) The emission factors approved for use by IDEM, OAM shall be taken from the following reference: "Unified Emission Factors for Open Molding of Composites," Composites Fabricators Association, April 1999. This reference is included with this permit. For HAP-emitting operations not addressed by this reference, emission factors shall be taken from U.S. EPA's AP-42 document. For the purposes of these emission calculations, HAP monomer in resins that is not styrene or methyl methacrylate shall be considered as styrene on an equivalent weight basis.
 - (4) Emission reduction techniques that are approved by IDEM, OAM include closed molding, vapor suppression, vacuum bagging/bonding, or installing a control device. The emission reductions from use of vapor suppression and vacuum bagging/bonding must be determined and approved by IDEM, OAM prior to use. Other emission reduction techniques must be approved by IDEM, OAM prior to use.
- (c) The listed work practices shall be followed:
- (1) To the extent possible, a non-VOC, non-HAP material shall be used for cleanup solvent.
 - (2) For VOC- and/or HAP-containing materials:
 - (A) Cleanup solvent containers shall be used to transport solvent from drums to work.
 - (B) Cleanup stations shall be closed containers having soft-gasketed, spring-loaded closures and shall be kept completely closed when not in use.
 - (C) Cleanup rags saturated with solvent shall be stored, transported, and disposed of in containers that are closed tightly.
 - (D) Resin applicators shall be the type that can be cleaned without the need for spraying the solvent into the air.
 - (E) All solvent sprayed during cleanup or resin changes shall be directed into containers. Such containers shall be closed as soon as solvent spraying is complete and the waste solvent shall be disposed of in such a manner that evaporation is minimized.
 - (F) All material storage containers shall be kept covered when not in use.

D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and any control devices.

Compliance Determination Requirements

D.1.4 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the VOC limit specified in Condition D.1.2 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.1.5 Volatile Organic Compounds (VOC)

Compliance with the styrene content and usage limitations contained in Conditions D.1.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer. IDEM, OAM reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.6 Record Keeping Requirements

- (a) To document compliance with Conditions D.1.1 and D.1.2, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC and HAP (Styrene) usage limits and/or the VOC and HAP emission limits established in Condition D.1.1 and D.1.2.
- (1) The amount and VOC and HAP content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
 - (2) A log of the dates of use;
 - (3) The volume weighted VOC and HAP content of the coatings used for each month;
 - (4) The cleanup solvent usage for each month;
 - (5) The total VOC and HAP usage for each month; and
 - (6) The weight of VOCs and HAPs emitted for each compliance period.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.7 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.1 and D.1.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (b) One (1) steel shot blaster, identified as Goff, with a maximum shot blasting capacity of two thousand and one hundred and sixty (2,160) pounds of steel parts per hour, and exhausting to a cyclone and a baghouse.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), the allowable PM emission rate from the shot blaster shall not exceed 4.28 pounds per hour when operating at a process weight rate of 2130 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Compliance Determination Requirements

D.2.2 Particulate Matter (PM)

The baghouse for PM control shall be in operation and control emissions from the shot blaster at all times that the shot blaster is in operation.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

**PART 70 SOURCE MODIFICATION
CERTIFICATION**

Source Name: Jackel, Inc.
Source Address: 15314 Harrison Road, Mishawaka, IN 46544
1022 Union Street, Mishawaka, IN 46544
Mailing Address: P.O. Box 96, Mishawaka, IN 46546-0096
Source Modification No.: 141-11875-00193

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this approval.

Please check what document is being certified:

- 9 Test Result (specify) _____
- 9 Report (specify) _____
- 9 Notification (specify) _____
- 9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

Part 70 Source Modification Quarterly Report

Source Name: Jackel, Inc.
Source Address: 15314 Harrison Road, Mishawaka, IN 46544
1022 Union Street, Mishawaka, IN 46544
Mailing Address: P.O. Box 96, Mishawaka, IN 46546-0096
Source Modification No.: 141-11875-00193
Facility: Six(6) Filament Winding Stations
Parameter: VOC/HAP/HAPs
Limit: 38% by weight of VOC or Styrene for corrosion Resistant/31% VOC by weight of VOC or Styrene for Non- Corrosion Resistant or Alternative methods approved by OAM

YEAR: _____

Month	Column 1			Column 2			Column 1 + Column 2		
	This Month			Previous 11 Months			12 Month Total		
	VOC	HAP	HAPs	VOC	HAP	HAPs	VOC	HAP	HAPs
Month 1									
Month 2									
Month 3									

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.

Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

**Indiana Department of Environmental Management
Office of Air Management**

**Technical Support Document (TSD) for a Part 70 Significant Source
Modification.**

Source Background and Description

Source Name:	Jackel, Inc.
Source Location:	15314 Harrison Road, Mishawaka, IN 46544 1022 Union Street, Mishawaka, IN 46544
County:	St. Joseph
SIC Code:	3088
Operation Permit No.:	141-11833-00193
Operation Permit Issuance Date:	Not Yet Issued
Significant Source Modification No.:	141-11875-00193
Permit Reviewer:	Spahi

The Office of Air Management (OAM) has reviewed a modification application from Jackel, Inc. relating to the construction of the following emission units and pollution control devices:

- (a) Six (6) polyester resin filament wound fiberglass tank stations, identified as 3, 4, 5, 6, 7 and 8, each station with a maximum molding capacity of sixty seven and one half (67.5) pounds of polyester resin per hour, using no controls, and exhausting inside the building.
- (b) One (1) steel shot blaster, identified as Goff, with a maximum shot blasting capacity of two thousand and one hundred and sixty (2,160) pounds of steel parts per hour, and exhausting to a cyclone and a baghouse.

Note: Two(2) polyester resin filament wound fiberglass tank stations, identified as 3 and 4 are located at 15314 Harrison Road, Mishawaka, IN 46544 and Four(4) polyester resin filament wound fiberglass tank stations, identified as 5, 6, 7 and 8 are located at 1022 Union Street Mishawaka, IN 46544.

History

On February 8, 2000, Jackel, Inc. submitted an application to the OAM requesting to add additional filament winding stations to their existing plants. Jackel, Inc. applied for a Part 70 permit on January 31, 2000, which is still pending.

Source Definition

This polyester resin filament winding fiberglass tank company consists of two (2) plants:

- (a) Plant 1 is located at 15314 Harrison Road, Mishawaka, IN 46544; and
- (b) Plant 2 is located at 1022 Union Street, Mishawaka, IN 46544.

Since the two (2) plants are located within 0.6 miles of each other, have the same SIC codes, all

tanks produced at plant 1 are stored at plant 2, has one(1) plant manager and are owned by one (1) company, they will be one (1) source.

Air Pollution Control Justification as an Integral Part of the Process

The company has submitted the following justification such that the cyclone be considered as an integral part of the shot blasting machine:

- (a) The primary purpose of the cyclone is to collect the steel shot blast media.
- (b) The cost of recovering steel shot blast media reduces the amount of media bought by the company. The savings from installing the baghouse and the cyclone pays for the shot blaster in seventy-five (75) work hours.
- (c) The cyclone would have been installed even if there were no air regulations in place.

IDEM, OAM has evaluated the justifications and agreed that the cyclone will be considered as an integral part of the shot blaster. Therefore, the permitting level will be determined using the potential to emit after the control equipment. Operating conditions in the proposed permit will specify that this cyclone shall operate at all times when the shot blaster is in operation.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on February 8, 2000. Additional information was received on March 28, 2000.

Emission Calculations

See Appendix A of this document for detailed emissions calculations from the shot blaster (1 Page.)

See Appendix B of this document for detailed emissions calculations from the filament winding machines (1 Page.)

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	2.19
PM-10	2.19
SO ₂	0.0
VOC	85.14
CO	0.0
NO _x	0.0

HAP's	Potential To Emit (tons/year)
Styrene	85.14
TOTAL	85.14

Justification for Modification

The Part 70 Operating permit is being modified through a Part 70 Significant Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5(f)(6) because it is a modification with a potential to emit greater than or equal (10) tons per year of a single hazardous air pollutant as defined under Section 112(b) of the CAA or twenty-five(25) tons per year of any combination of hazardous air pollutants.

County Attainment Status

The source is located in St. Joseph County.

Pollutant	Status
PM-10	Attainment
SO ₂	Attainment
NO ₂	Attainment
Ozone	Maintenance
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. St. Joseph County has been designated as maintenance attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) St. Joseph County has been classified as attainment or unclassifiable for PM and PM-10. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	0.0
PM-10	0.0
SO ₂	0.0
VOC	36.66
CO	0.0
NO _x	0.0

- (a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.
- (b) These emissions are based upon the Part 70 application submitted by the Permittee.

Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
Filament Stations	0.0	0.0	0.0	85.14	0.0	0.0	85.14*
Shot Blaster	1.24	1.24	0.0	0.0	0.0	0.0	0.0
Total	1.24	1.24	0.0	85.14	0.0	0.4	85.14*
PSD Significant Levels	250	250	250	250	250	250	-

* HAP = styrene

This modification to an existing minor stationary source is not major because the emission increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.
- (b) This source is subject to the National Emission Standards for Hazardous Air Pollutants, 326 IAC 14, (40 CFR 63.40 to 63.44(MACT), Subpart B) because this subpart applies to any owner or operator who constructs and reconstructs a major source of hazardous air pollutants after the effective date of section 112(g)(2)(B).

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than ten (10) tons of volatile organic compounds(VOC) per year and it is located in one of the listed counties(St. Joseph County). Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by April 15 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of thirty percent (30%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 2-4.1-1 (New Source Toxics Control):

The polyester resin filament wound fiberglass tank stations are subject to 326 IAC 2-4.1-1 (MACT) because these facilities emits either a single HAP greater than 10 ton/yr or a combination of HAPs greater than 25 ton/yr. This rule(326 IAC 2-4.1-1) requires the determination and installation of Maximum Achievable Control Technology (MACT). MACT for a new source is defined as the control achieved by the best controlled similar source.

All available information is to be considered in determining MACT. Available information includes a proposed Section 112(d) standard for the source category (also referred to as a MACT standard), a presumptive MACT determination, or background information developed for a proposed MACT standard. The MACT standard for filament winding has not been proposed yet, but in October 1999, U.S. EPA made available background information that represents a kind of presumptive MACT determination.

That information indicates that MACT for a new filament winding source making corrosion resistant products is use of resins containing no more than 38% HAP by weight. MACT for a new filament winding source making non-corrosion resistant products is use of resins containing no more than 31% HAP by weight. Accordingly, this is the MACT that has been determined for this new facility.

U.S. EPA has expressed information on MACT for the reinforced plastic composites industry source category in terms of "point values." Point values express an emissions rate in pounds of emissions per ton of resin processed. The point values are based on styrene content levels and use of emission reduction techniques such as add-on controls. IDEM, OAM chooses to express the MACT instead in terms of the styrene content that underlies the point value. Expressing the MACT as a point value is intended to make use of emissions averaging easier, but IDEM, OAM has written alternative conditions that allow use of emissions averaging to meet the HAP content standards.

EPA has not yet defined corrosion resistant resin. IDEM, OAM is in the process of developing a state rule to address emissions from the reinforced plastic composites industry. As a comment

on the draft rule, IDEM, OAM received from the fiberglass reinforced plastics industry association a proposed definition of corrosion resistant resins. Since this represents a valid source of available information, that definition has been included in this permit.

326 IAC 6-3-2 (Process Operations)

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

$$P = 2130 \text{ lbs/hr} = 2130 \text{ lbs/hr} \times 1 \text{ ton}/2000 \text{ lbs} = 1.065 \text{ tons/hr}$$

$$E = 4.10(1.065)^{0.67} = 4.28 \text{ lbs of PM/hr}$$

The PTE of the shot blaster after the baghouse is 0.28 lbs of PM/hr < Allowable emissions of 4.28 lbs of PM/hr.

This shot blaster meets this rule.

The baghouse/cyclone shall be in operation at all times the shot blaster is in operation, in order to comply with this limit.

326 IAC 8-1-6(BACT)

The polyester resin filament wound fiberglass tank stations are subject to 326 IAC 8-1-6 because these new facilities will have potential VOC emissions greater than 25 tpy. This rule (326 IAC 8-1-6) requires the determination and installation of Best Available Control Technology (BACT). IDEM considers the MACT for this facility determined pursuant to 326 IAC 2-4.1-1 to also represent BACT for this facility. Compliance with the MACT shall be considered to satisfy the requirements of 326 IAC 8-1-6.

Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 141-11875-00192.

D.1.2 New Source Toxics Control [326 IAC 2-4.1-1]

The Permittee shall comply with the following conditions that have been determined to be Maximum Achievable Control Technology for the new **[filament winding facility]**:

- (a) The HAP monomer content of styrene-containing resins used shall be limited to the following:

Type of Resin	HAP Monomer Content, % by weight
Corrosion Resistant	38
Non-Corrosion Resistant	31

- (1) HAP monomer contents shall be calculated on a neat basis, which means excluding any filler.
- (2) Corrosion resistant resin means a resin that meets the criteria in subsections (A) and (B), or (B) and (C) below:
- (A) A resin that displays substantial retention of mechanical properties by one of the following methods:
- (i) Using ASTM C-581 coupon testing, the corrosion resin will be exposed for not less than six month to one of the following: materials with a pH ≥ 12.0 or ≤ 3.0 , oxidizing or reducing agents, organic solvents, or fuels or fuel additives as defined in 40 CFR 79.2.
- (AA) The exposed resin shall demonstrate a minimum of fifty percent (50%) retention of the relevant mechanical property compared to the same resin in the unexposed condition.
- (BB) In addition, the resin shall demonstrate an increased retention of the relevant mechanical property of at least twenty percent (20%) when compared to a similarly exposed general-purpose resin. For example, if the general-purpose resin retains forty-five percent (45%) of the relevant property when tested as specified above, then a corrosion resin must retain at least sixty-five percent (65% (45% + 20%)) of its property. The general purpose resin used for comparison shall be one formulated with a one to two (1:2) ratio of maleic anhydride to phthalic anhydride, one hundred percent (100%) diethylene glycol, a molecular weight (M_N) greater than one thousand (1000), and styrene content of not less than forty-three percent (43.0%) or greater than forty eight percent (48.0%).
- (ii) Comply with industry standards that require specific exposure testing to corrosive media, such as UL 1316, UL 1746, or ASTM F-1216.
- (B) The resin is used to manufacture a product to an accepted standard for

corrosion-resistance or food contact. Such standards include, but are not limited to, ASME RTP-1, or Section X; ASTM D2296, D2297, D3262, D3299, D3517, D3754, D3839, D3840, D3982, D4024, D4097, D4160, D4161, D4162, D4163, D4184, or D5364; ANSI/AWWA C950; UL 1316 OR 1746; or written customer requirements for resin type or resistance to specified chemical environments.

- (C) The resin is used to manufacture a product specifically for an application that requires increased chemical inertness or resistance to chemical attack. Such applications may include, but are not limited to, products intended for use in chemical processing, chemical storage, pulp and paper, sewer and waste water treatment, power generation, potable water, food and drug processing, pollution or odor control, metals production and plating, semiconductor manufacturing, petroleum production, petroleum storage, petroleum refining, mining, textiles, nuclear, cosmetic, septic systems, oil-water separators, stacks, hoods, ducts, scrubbers, fans, tanks and vessels.
- (b) Resins with HAP monomer contents lower than that required in subsection (a) and/or other emission reduction techniques approved by IDEM, OAM may be used to offset the use of resins with HAP monomer contents higher than that required in subsection (a). This is allowed to meet the HAP monomer content limits for resins in subsection (a), and if used, compliance shall be demonstrated as follows:
- (1) Compliance shall be demonstrated on an equivalent emissions mass basis. using the following equation:
- $$\frac{(\text{Emissions from higher than compliant HAP monomer content resin}) - (\text{Emissions from compliant resin})}{(\text{Emissions from lower than compliant HAP monomer content resin and/or using other emission reduction techniques})}$$
- Where:
Emissions, lb or ton = M (mass of resin used, lb or ton) * EF (HAP monomer emission factor for resin used, lb/ton); and
- EF, HAP monomer emission factor = emission factor, expressed as pounds (lbs) HAP emitted per ton of resin processed, which is indicated by the HAP monomer content and/or other emission reduction techniques for each resin used.
- (2) The calculation in subsection (b)(1) above to demonstrate compliance shall be made and recorded on a monthly basis. Monthly resin usage by weight, weight percent content of HAP monomer for each resin, and other emission reduction technique used for each resin shall also be recorded.
- (3) The emission factors approved for use by IDEM, OAM shall be taken from the following reference: "Unified Emission Factors for Open Molding of Composites," Composites Fabricators Association, April 1999. This reference is included with this permit. For HAP-emitting operations not addressed by this reference, emission factors shall be taken from U.S. EPA's AP-42 document. For the purposes of these emission calculations, HAP monomer in resins that is not styrene or methyl methacrylate shall be considered as styrene on an equivalent weight basis.

- (4) Emission reduction techniques that are approved by IDEM, OAM include closed molding, vapor suppression, vacuum bagging/bonding, or installing a control device. The emission reductions from use of vapor suppression and vacuum bagging/bonding must be determined and approved by IDEM, OAM prior to use. Other emission reduction techniques must be approved by IDEM, OAM prior to use.
- (c) The listed work practices shall be followed:
 - (1) To the extent possible, a non-VOC, non-HAP material shall be used for cleanup solvent.
 - (2) For VOC- and/or HAP-containing materials:
 - (A) Cleanup solvent containers shall be used to transport solvent from drums to work.
 - (B) Cleanup stations shall be closed containers having soft-gasketed, spring-loaded closures and shall be kept completely closed when not in use.
 - (C) Cleanup rags saturated with solvent shall be stored, transported, and disposed of in containers that are closed tightly.
 - (D) Resin applicators shall be the type that can be cleaned without the need for spraying the solvent into the air.
 - (E) All solvent sprayed during cleanup or resin changes shall be directed into containers. Such containers shall be closed as soon as solvent spraying is complete and the waste solvent shall be disposed of in such a manner that evaporation is minimized.
 - (F) All material storage containers shall be kept covered when not in use.

TSD language

New Source Toxics Control [326 IAC 2-4.1-1]

Because this new facility will emit or have the potential to emit 10 tpy or more of an individual HAP (styrene), the facility will be a major source of HAP subject to 326 IAC 2-4.1-1, which requires the determination and installation of Maximum Achievable Control Technology (MACT). MACT for a new source is defined as the control achieved by the best controlled similar source.

All available information is to be considered in determining MACT. Available information includes a proposed Section 112(d) standard for the source category (also referred to as a MACT standard), a presumptive MACT determination, or background information developed for a proposed MACT standard. The MACT standard for filament winding has not been proposed yet, but in October 1999, U.S. EPA made available background information that represents a kind of presumptive MACT determination.

That information indicates that MACT for a new filament winding source making corrosion resistant products is use of resins containing no more than 38% HAP by weight. MACT for a new filament winding source making non-corrosion resistant products is use of resins containing no more than 31% HAP by weight. Accordingly, this is the MACT that has been determined for this new facility.

U.S. EPA has expressed information on MACT for the reinforced plastic composites industry source category in terms of "point values." Point values express an emissions rate in pounds of emissions per ton of resin processed. The point values are based on styrene content levels and use of emission reduction techniques such as add-on controls. IDEM, OAM chooses to express the MACT instead in terms of the styrene content that underlies the point value. Expressing the MACT as a point value is intended to make use of emissions averaging easier, but IDEM, OAM has written alternative conditions that allow use of emissions averaging to meet the HAP content standards.

EPA has not yet defined corrosion resistant resin. IDEM, OAM is in the process of developing a state rule to address emissions from the reinforced plastic composites industry. As a comment on the draft rule, IDEM, OAM received from the fiberglass reinforced plastics industry association a proposed definition of corrosion resistant resins. Since this represents a valid source of available information, that definition has been included in this permit.

VOC BACT [326 IAC 8-1-6]

Because this new facility will have potential VOC emissions greater than 25 tpy, it is subject to 326 IAC 8-1-6, which requires the determination and installation of Best Available Control Technology (BACT). IDEM considers the MACT for this facility determined pursuant to 326 IAC 2-4.1-1 to also represent BACT for this facility. Compliance with the MACT shall be considered to satisfy 326 IAC 8-1-6.

Appendix A: Emission Calculations

Company Name:	Jackel, Inc.
Address City IN Zip:	15314 Harrison Road, Mishawaka, IN 46544
	1022 Union Street, Mishawaka, IN 46544
CP:	141-11875
Plant ID:	141-00192
Reviewer:	Spahi
Date:	04-05-2000

Shot Blasting Operations

Process Operations: Particulate Emissions Limitations

Pursuant to 326 IAC 6-3-2, the particulate matter(PM) from operation shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by the use of the equation:

$$E = 4.10P^{0.67} \quad \text{Where } E = \text{rate of emissions in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

$$\text{Where } P = 2130(\text{lbs/hr}) * 1/2000(\text{tons/lbs}) = 1.065 \text{ tons/hr} \\ E = 4.10 (1.065)^{0.67} = 4.28 \text{ lbs/hr}$$

So the allowable emissions is 4.28 lbs/hr.

Potential Particulate Emissions

The cyclone is a integral part of the process, so the potential emissions are going to be calculated after controls.

PTE of the Shot blaster before baghouse:

Amount of dust collected in the bag at maximum process weight = 0.50 lbs of PM/hr

PTE of the Shot blaster = 0.50 lbs of PM/hr x 1 ton/2000 lbs x 8760 hrs/yr = 2.19 tons of PM/yr

Potential to emit of the shot blaster after the baghouse:

Outlet grain loading after baghouse = 0.03 grains/acfm

Flow rate after baghouse = 1100 acfm

Potential to emit of PM from the Shot after the baghouse
 = 0.03 grains/acfm x 1100 acfm x 60 min/hr x 7000 grains/lb
 = 0.28 lbs of PM/hr
 = 0.28 lbs of PM/hr x 8760 hrs/year x 1 ton/2000 lbs
 = 1.24 tons of PM/yr

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